

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/625,279	KAMIOKA ET AL.	
	Examiner	Art Unit	
	Parul Gupta	2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 8/4/06.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|  | 9. <input type="checkbox"/> Other _____.  |

***Allowable Subject Matter***

Claims 1-12 are allowed.

The following is an examiner's statement of reasons for allowance: claims 1, 10, 11, and 12 are allowed over the prior art of record because all of the cited references of the record, viewed as closest prior art and considered individually or in combination fail to suggest or fairly teach an optical disk drive including a combination of all of the limitations and their relative functional operations as particularly recited in each of claims 1, 10, 11, and 12. Claims 2-9 are allowed with their respective parent claims.

Regarding claim 1, the closest prior art of record is Minagawa, US Patent Publication 2003/0223341 and Wu et al., US Patent 6,298,023. Minagawa discloses in figure 1 an optical disc drive, which performs a data write operation on an optical disc by irradiating the optical disc with light such that a plurality of marks are formed on the optical disc, the optical disc drive comprising: an optical head (3) including a light source and a photodetector and for outputting a first read signal (Sdet) by getting the light emitted from the light source, reflected from the optical disc, and then detected by the photodetector; a read signal processor (4); and a controller (13). Minagawa does not but Wu et al. teaches processing the first read signal received into a second read signal and outputting the second read signal in response to one of a first control signal and a second control signal, wherein the second read signal output by the read signal processor in response to the first control signal is held at a predetermined level, while the second read signal output by the read signal processor in response to the second control signal has a level corresponding to that of the first read signal. Column 10, lines 23-35 show how the writing mechanism is controlled based on various control signals. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of multiple control signals as taught by Wu et al. into the system of Minagawa. This would serve the purpose of maximizing accuracy of write control (column 2, lines 25-36). However, neither reference teaches the specific timings of the two control signals. Namely, the references fail to disclose an optical disc drive comprising all of the limitations in combination set forth in the claim, specifically including generating

the first and second control signals and outputting the first control signal during a first period and the second control signal during a second period following the first period, respectively, the first period beginning before the marks are formed and ending while the marks are being formed, wherein the optical disc drive controls the data write operation in accordance with the second read signal that has been output from the read signal processor. Claims 2-9 are allowed as being dependent on claim 1.

Regarding claim 10, the closest prior art of record is Minagawa, US Patent Publication 2003/0223341 and Wu et al., US Patent 6,298,023. Minagawa teaches a method of performing a data write operation on an optical disc by irradiating the optical disc with light such that a plurality of marks are formed on the optical disc (paragraph 0053), the method comprising the steps of: detecting the light that has been emitted from a light source and then reflected from the optical disc (paragraph 0054); outputting a first read signal that represents the light detected (Sdet of paragraph 0054). Minagawa does not but Wu et al. teaches processing the first read signal into a second read signal and outputting the second read signal in response to one of a first control signal and a second control signal, wherein the second read signal being output in response to the first control signal is held at a predetermined level, while the second read signal being output in response to the second control signal has a level corresponding to that of the first read signal. Column 10, lines 23-35 show how the writing mechanism is controlled based on various control signals. However, neither reference teaches the specific timings of the two control signals. Namely, the references fail to disclose an optical disc drive comprising all of the limitations in combination set forth in the claim, specifically including generating the first and second control signals and outputting the first control signal during a first period and the second control signal during a second period following the first period, respectively, the first period beginning before the marks are formed and ending while the marks are being formed, wherein the optical disc drive controls the data write operation in accordance with the second read signal that has been output from the read signal processor.

Regarding claim 11, the closest prior art of record is Minagawa, US Patent Publication 2003/0223341 and Wu et al., US Patent 6,298,023. Minagawa teaches a computer readable storage medium having stored thereon a computer program (explained in paragraphs 0050 and 0051) for use with an optical disc drive including an optical head, a read signal processor and a controller and performing a data write operation on an optical disc by irradiating the optical disc with light such that a plurality of marks are formed on the optical disc, the optical head including a light source that emits the light and a photodetector that detects the light, wherein the computer program product causes the optical disc drive to perform steps of: emitting the light emitted from the light source (paragraph 0053); detecting the light, which has been reflected from the optical disc, by means of the photodetector (paragraph 0054); outputting a first read signal, representing the light detected, from the optical head (paragraph 0054). The different times at which the control processor generates signals are examples of the different periods. Minagawa does not but Wu et al. teaches a method that involves generating a second read signal at the read signal processor in response to one of a first control signal and a second control signal, wherein the second read signal being output in response to the first control signal is held at a predetermined level, while the second read signal being output in response to the second control signal has a level corresponding to that of the first read signal. Column 10, lines 23-35 show how the writing mechanism is controlled based on various control signals. However, neither reference teaches the specific timings of the two control signals. Namely, the references fail to disclose an optical disc drive comprising all of the limitations in combination set forth in the claim, specifically including generating the first and second control signals and outputting the first control signal during a first period and the second control signal during a second period following the first period, respectively, the first period beginning before the marks are formed and ending while the marks are being formed, wherein the optical disc drive controls the data write operation in accordance with the second read signal that has been output from the read signal processor.

Regarding claim 12, the closest prior art of record is Minagawa, US Patent Publication 2003/0223341 and Wu et al., US Patent 6,298,023. Minagawa teaches in figure 1 a control processor (13), which is included in an optical disc drive and which selectively operates in one of a first operation mode and a second operation mode, the optical disc drive performing a data write operation on an optical disc by irradiating the optical disc with light such that a plurality of marks are formed on the optical disc (paragraph 0017), the optical disc drive comprising an optical head (3) including a light source and a photodetector and outputting a first read signal by getting the light emitted from the light source, reflected from the optical disc, and then detected by the photodetector (paragraph 0054), and a read signal processor (4) for processing the first read signal received into a second read signal and outputting the second read signal in response to one of a first control signal and a second control signal, and wherein while operating in the first operation mode. Minagawa does not but Wu et al. teaches a method wherein the second read signal output by the read signal processor in response to the first control signal is held at a predetermined level, while the second read signal output by the read signal processor in response to the second control signal has a level corresponding to that of the first read signal. Column 10, lines 23-35 show how the writing mechanism is controlled based on various control signals. However, neither reference teaches the specific timings of the two control signals. Namely, the references fail to disclose an optical disc drive comprising all of the limitations in combination set forth in the claim, specifically including the control processor that generates and outputs the first control signal during a first period and the second control signal during a second period following the first period, respectively, the first period beginning before the marks are formed and ending while the marks are being formed, and wherein while operating in the second operation mode, the control processor generates and outputs the first control signal during a third period and the second control signal during a fourth period following the third period, respectively, the third period not overlapping with the first period.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 8:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PHG  
8/7/06

  
ANDREA WELLINGTON  
SUPERVISORY PATENT EXAMINER